Powerful trends; Peaking plants require monitoring, efficiency

Oct 16 - Sarasota Herald Tribune

A power plant under construction in DeSoto County represents a trend toward smaller plants that operate only during times of peak demand. But that trend poses challenges to Floridians, regulators and the environment.

The so-called peaking plants are exempt from the state's power- plant siting law, so they receive far less official scrutiny than the larger plants owned by regulated utilities. They also aren't allowed to operate as efficiently as large power plants.

As the peaking plants proliferate across Florida -- three are planned for Manatee County -- their cumulative effects could rival the impacts of a larger generating station. Those cumulative impacts demand closer state monitoring and regulation.

The DeSoto County Generating Co. is a subsidiary of Progress Energy, a partnership of the Florida Power Co. and Carolina Power & Light of Raleigh, N.C. Recently, the company signed a contract to sell its power during peak demand periods to Florida Power & Light, which owns a nearby power substation and high-voltage transmission line.

While the DeSoto plant will introduce industrial emissions to a relatively unblemished region, those impacts are considered too minor by state regulators to warrant weightier concern. The plant needs only local planning and zoning review, state air- quality permits and a water-use permit.

If the application for the plant had been handled under the state's power-plant siting act, state environmental agencies, the regional planning council, the Department of Community Affairs and other public agencies would have scrutinized the economic, environmental and land-use impacts while offering greater public access to the permitting process.

Also, as a result of the siting act and a Florida Supreme Court ruling, the DeSoto plant will never operate at top efficiency.

The siting act was written largely by lobbyists for regulated utility companies -- such as FPL, Florida Power Corp. and Tampa Energy Co. The large utilities feared competition from the smaller, more efficient peaking plants. Consequently, the act puts a ceiling on the amount of power that peaking plants can generate.

The DeSoto County plant will run combustion turbines (jet engines) on natural gas to drive two 150-megawatt peaking generators. The state Department of Environmental Protection has permitted the plant for a total output of 510 megawatts, thus providing capacity for a third combustion turbine-generator array. Its turbines also can burn light oil.

If the plant could extract maximum efficiency from its fuel, it would harness waste heat as the regulated utilities do -- essentially using the heat exhausted from its stacks to generate steam power. But that extra capacity would violate the law's regulatory ceiling.

In addition, the state Supreme Court has ruled that -- because they lack a dedicated retail customer base such as the businesses, homes and institutions that FPL and other regulated utilities serve - - peaking plants are not permitted to compete with the larger plants.

Such restrictions make little sense in times of decreasing energy reserves and greater need for fuel efficiency.

If these peaking plants proliferate, as some industry analysts believe they might, the state should monitor their cumulative impacts -- just as it would full-scale generating stations. While individually their burdens or potential may not seem significant, collectively they may make quite a difference. The state should know what that difference might be, in terms of pollution and efficiency.
